



# Test Monitoring Center

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L-33 Information Letter No. 02-2  
Sequence No. 16  
May 30, 2002

***ASTM consensus has not yet been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.***

TO: L-33 Mailing List

SUBJECT: Report Form Changes

At the April 10, 2002 L-33 Surveillance Panel meeting, the panel approved a motion to revise the L-33 report forms and data dictionary. Replacement pages for the L-33 test procedure (STP512A) are attached and include revised Sections 9.2.2.1, 9.2.2.2 and Annex A3. These changes are effective June 10, 2002.

Dale Smith  
Chairman  
L-33 Surveillance Panel

John L. Zalar  
Administrator  
ASTM Test Monitoring Center

Attachment

c: [ftp://ftp.astmtmc.cmu.edu/docs/gears/l33/procedure\\_and\\_ils/il02-2.pdf](ftp://ftp.astmtmc.cmu.edu/docs/gears/l33/procedure_and_ils/il02-2.pdf)

Distribution: Email

- 9.2.2.1 *Drive Pinion Shaft Installation*—Assemble the drive pinion shaft with its bearings and install it in the housing following the guidelines in Dana Bulletin No. 5304-2<sup>5</sup>. Torque pinion-nut to 160-200 lbf-ft not the values listed in Dana Bulletin 5304-2. Determine pinion turning torque. See Section 9.2.2.2 for break and turn specifications. Record the final break and turning torque on the test report Form 3 (Annex A3).
- 9.2.2.2 *Differential Case Installation*—Assemble the differential pinion, side gears, shafts and thrust washers, shims, bearings and caps in the differential case. Then install the differential case assembly in the differential housing. Measure break and turning torque; turn torque shall be 7 to 13 lbf-in.(0.8 to 1.5 N m) and break torque shall be 8 to 18 lbf-in.(1.4 to 2.0 N m) The torque may be adjusted by either case disassembly and adding or removing shims, or adjusting the pinion pre-load following the guidelines in Dana Bulletin No. 5304-2. Record final break and turning torque on the test report Form 3 (Annex A3).
- 9.2.2.2.1 After completion of the test axle build and before the cover plate installation, place the test axle in a vertical position with the yoke in the upward position. Place the cover in a vertical position. Allow the assembled test axle and cover plate to drain for a minimum of 10 minutes.
- 9.2.2.3 *Test Oil Addition*- Charge  $40 \pm 1$  fl oz ( $1.20 \pm 0.03$  L) of test oil to the test unit.
- 9.2.2.4 *Cover Plate, Seals, Temperature Probe Installation*—Install the cover plate with a new Teflon gasket, prewetted with the test oil on both sides (see Section 6.2.4). A new Teflon cover plate gasket is required for every test. Torque the cover plate bolts to 20–25 ft-lbf. Insert the two axle tube opening seals (Fig. 2) until they touch the differential case bearings, then pull back approximately 1/8th inch. Tighten the seals and install the temperature probe using Teflon tape as per Fig. 4, Fig. 12 and Fig. 13. Install the NPT stainless steel 90<sup>o</sup> street ell and stainless steel full port valve.

## 10. CALIBRATION

### 10.1 *Storage Box Calibration*

- 10.1.1 Reference oils for stand calibration are available from the ASTM Test Monitoring Center<sup>8</sup> (TMC). Laboratories wishing to calibrate storage boxes using these oils shall participate in the referencing and storage box calibration program administered for this test by the TMC.

### **A3. L-33 TEST REPORT FORMS and DATA DICTIONARY**

The required report forms and data dictionary are available on the ASTM Test Monitoring Center Web Page at <http://astmtmc.cmu.edu/> or can be obtained in hardcopy format from the TMC.

Form 0	Test Report Cover
Form 1	Test Result Summary Page
Form 2	Rating Summary Page
Form 3	Operational Validity Summary
Form 4	Pre Test Rating Page
Form 5	Page Lost Time and Comments Sheet